

REMARKS

By this Amendment, claims 1-18 are cancelled, and claims 19-45 are added. Thus, claims 19-45 are active in the application. Reexamination and reconsideration of the application are respectfully requested.

The specification and abstract have been carefully reviewed and revised to correct grammatical and idiomatic errors in order to aid the Examiner in further consideration of the application, and to correct the informalities of the Abstract identified by the Examiner in item 4 on page 3 of the Office Action. The amendments to the specification and abstract are incorporated in the attached substitute specification and abstract. No new matter has been added.

Also attached hereto is a marked-up version of the substitute specification and abstract illustrating the changes made to the original specification and abstract.

In item 2 on page 2 of the Office Action, the Examiner required that Figures 18-21 be labeled as "Prior Art". In response to the Examiner's requirement, Figures 18-21 have each been labeled as "Prior Art". Further, in item 3 on page 2, the Examiner objected to the drawings as not disclosing every feature of the present invention which are recited in the claims. In particular, the Examiner required that the "cover base member" as recited in the claims be illustrated in the drawings. In response to the Examiner's requirement, Figure 17 has been revised in order to illustrate the cover base member 26 between the pressing projection 8 of the key-top portion 3 and the elastically deformable dome portion 22 of the contact point sheet 23. Replacement formal drawings of Figures 1-21 are submitted concurrently herewith under a separate cover letter in order to revise Figures 17-21 as described above. Approval of the replacement formal drawings is respectfully requested.

A description of the cover base member 26 illustrated in revised Figure 17 was added below line 9 on page 49 of the original specification. The Applicants note that an identical description of the cover base member, except for minor editorial revisions, was originally presented in lines 13-23 on page 18 of the original specification. Accordingly, the Applicants submit that no new matter was added to the substitute specification via the added description of the cover base member 26 as illustrated in revised Figure 17.

In item 6 on page 3 of the Office Action, claims 1, 6-7 and 12-14 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lemarchand et al. (EP 0,981,144). The Applicants will hereinafter refer to U.S. 6,416,196 to Lemarchand et al. (hereinafter “Lemerchand et al.”) in the following remarks since Lemerchand et al. is an English language translation of EP 0,981,144. Further, in item 7 on page 4 of the Office Action, claims 1 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Tanabe (U.S. 5,871,088). These rejections are believed to be moot in view of the cancellation of claims 1-18. The Applicants respectfully submit that these rejections are inapplicable to new claims 19-45 for the following reasons.

The present invention, as recited in each of new claims 19 and 33, provides a push-button switch member which comprises, in part, a transparent electrode which is disposed so as to oppose the base electrode and to contact with the display section. The transparent electrode is continuously and integrally formed in a range including and between a side surface and an upper surface of the key-top portion. Further, the transparent electrode comprises a transparent conductive polymer which is selected from the group consisting of a derivative of polypyrrole, a derivative of polythiophene and a derivative of polyaniline. Accordingly, the transparent conductive polymer of the transparent electrode is highly extendable as compared with the conventional conductive ink as used in Lemerchand et al., for example.

Lemerchand et al. discloses a push-button switch member 1 which uses a transparent conducting ink (ITO) for the transparent electrode 6 (see Column 3, lines 24-45). Further, Lemerchand et al. also discloses that a conducting track 213 is made of the conducting ink (see Column 5, lines 26-28). Accordingly, Lemerchand et al. clearly does not disclose or suggest a transparent electrode comprising a transparent conductive polymer which is selected from the group consisting of a derivative of polypyrrole, a derivative of polythiophene and a derivative of polyaniline, as recited in new claims 19 and 33.

Further, Tanabe uses indium oxide for the transparent electrode 4 (see Column 2, lines 44-58). Accordingly, Tanabe, similar to Lemerchand et al., also clearly does not disclose or suggest a transparent electrode comprising a transparent conductive polymer which is selected

from the group consisting of a derivative of polypyrrole, a derivative of polythiophene and a derivative of polyaniline, as recited in new claims 19 and 33.

Accordingly, neither Lemerhand et al. nor Tanabe, either individually or in combination, disclose or suggest each and every limitation of new claims 19 and 33. Therefore, new claims 19 and 33 are clearly not anticipated by either Lemerhand et al. or Tanabe since Lemerhand et al. and Tanabe each fail to disclose each and every limitation of new claims 19 and 33.

Further, as described above, the transparent electrode of the present invention comprises a transparent conductive polymer which is selected from the group consisting of a derivative of polypyrrole, a derivative of polythiophene and a derivative of polyaniline. Accordingly, the transparent conductive polymer of the transparent electrode is highly extendable as compared with the conventional conductive ink, and therefore, the present invention, as recited in new claims 19 and 33, provides the following advantages over conventional push-button switch members such as those disclosed in Lemerhand et al. and Tanabe.

In particular, the present invention allows for the same conductive material or ingredient to be applied over a side surface portion and a top surface portion integrally so that the number of ingredients to be used can be reduced, which in turn thereby reduces the manufacturing and processing costs. Further, at the time of the drawing process of forming the key-top portion, a conductive property of the highly extendable transparent electrode of the present invention is not damaged as in the case of Lemerhand et al. in which a conductive ink is used where the conductive ink is highly extended over the key-top portion. Thus, since the conductive ink of Lemerhand et al. is highly extended over the key-top portion, it is possible that the key-top will be damaged because of the cylindrical shape of the key-top portion.

Further, the present invention provides for long term stability, and a practical use thereof can be ensured because the selected polymers of the present invention have a good resistance to oxygen and humidity, which thereby improves display visibility and switching reliability. Electro-conductivity of the transparent conductive polymer of the transparent electrode of the present invention is kept stable for a longer period than the conventional conductive ink in that

the conductivity of the conventional conductive ink is decreased when small cracks are developed in the conductive ink as used in Lemarchand et al. and Tanabe, for example.

In item 9 on page 5 of the Office Action, claims 2, 3 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanabe. Further, in item 10 on page 6 of the Office Action, claims 4, 8 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lemarchand et al. in view of Tanabe. These rejections are believed to be moot in view of the cancellation of claims 1-18. As described above, neither Lemarchand et al. nor Tanabe, either individually or in combination, disclose or suggest each and every limitation of new claims 19 and 33. Therefore, Lemarchand et al. and Tanabe each also fail to disclose or suggest the limitations recited in new claims 20-32 and 34-45 which depend from new claims 19 and 33, respectively.

Furthermore, because of the clear distinctions discussed above, the Applicants respectfully submit that no obvious combination of Lemarchand et al. and Tanabe would result in the inventions of new claims 19 and 33 since Lemarchand et al. and Tanabe each fail to disclose or suggest each and every limitation of new claims 19 and 33. Moreover, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time the invention was made would not have been motivated to modify Lemarchand et al. and Tanabe in such a manner as to result in, or otherwise render obvious, the present invention as recited in new claims 19 and 33. Therefore, it is submitted that new claims 19 and 33, as well as claims 20-32 and 34-45 which depend therefrom, are clearly allowable over the prior art as applied by the Examiner.

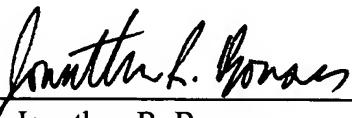
In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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